

# Service Manual

Stereo Radio Cassette Player

Radio Cassette  
**RQ-V340**



Color

(K) ..... Black Type

## Area

Country Code	Area	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	
(EG)	F.R. Germany	
(EF)	France	

## RQ-V340 MECHANISM SERIES

### ■ SPECIFICATIONS

#### General:

Power Requirement:

Battery; 1.5 V (one UM-3, "R6/LR6 battery)

AC; with optional AC adaptor RPAC1Z (For EB; RPAC1ZE)

18 mW (9 mW×2)...RMS (max.)

Power Output:

Input:

DC IN; 1.5 V (mini jack)

Output:

HEADPHONES; 16Ω, Ø3.5

Dimensions:

72 (W)×121 (H)×24.9 (D) mm

Weight:

167 g without battery

#### Radio Section:

Radio Frequency Range:

FM; 87.5~108 MHz

AM; 520~1610 kHz

Intermediate Frequency:

FM; 10.7 MHz

AM; 455 kHz

Sensitivity:

FM; 2.5 μV/0.1 mW output (−3 dB Limit sens)

AM; 252 μV/m/0.1 mW output

#### Tape Deck Section:

Frequency Response:

30~18,000 Hz (NORMAL/CrO<sub>2</sub>/METAL)

Track System:

4-track 2-channel stereo playback

Tape Speed:

4.8 cm/s

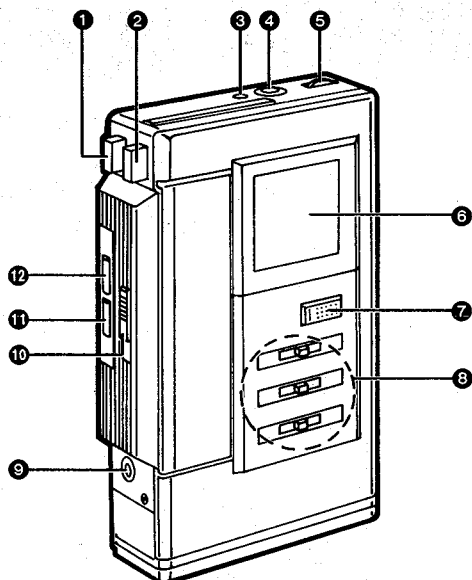
Weights and dimensions shown are approximate.

Design and specifications are subject to change without notice.

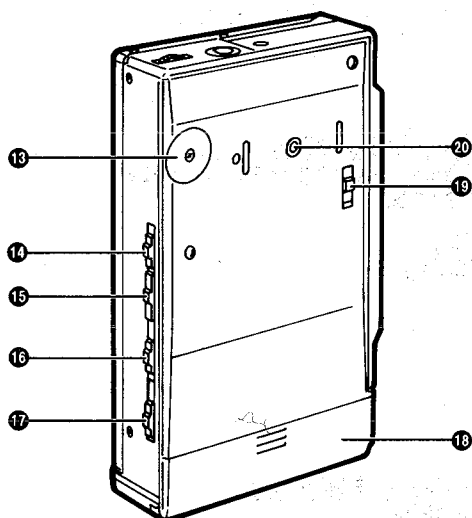
# Panasonic

**Matsushita Electric Industrial Co., Ltd.**  
Central P.O. Box 288, Osaka 530-91, Japan

# LOCATION OF CONTROLS

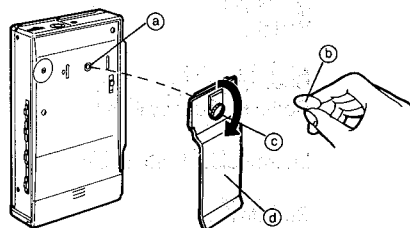


- ❶ Playback Button (▶ PLAY)
- ❷ Stop Button (■ STOP)
- ❸ Tape/Battery Check Indicator (TAPE/BATT)
- ❹ Headphones Jack ( ) (16Ω, Ø3.5)
- ❺ Volume Control (VOLUME)
- ❻ Cassette Cover
- ❼ XBS Switch (XBS)
- ❽ Graphic Equalizer Controls
- ❾ DC Input Jack (DC IN 1.5 V ⊖ ⊕ mini Jack)
  - Optional AC adaptor, RPAC1Z
  - For (EB) use optional AC adaptor, RPAC1ZE
- ❿ Open Lever (OPEN)
- ⓫ Rewind Button (REW)
- ⓬ Fast Forward/Direction Button (FF • DIR)
- ⓭ Tuning Control (TUNING)
- ⓮ Function Selector (SELECTOR)
- ⓯ Reverse Mode/Band Selector (REV MODE/BAND)
- ⓰ \*Dolby Noise Reduction Switch (DOLBY NR)
- ⓱ Tape Selector (TAPE)
- ⓲ Battery Compartment
- ⓳ Hold Switch (HOLD)
  - This only works for ❶ and ❷ buttons.
- ⓴ Belt Clip Fixing Hole



\*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
 "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

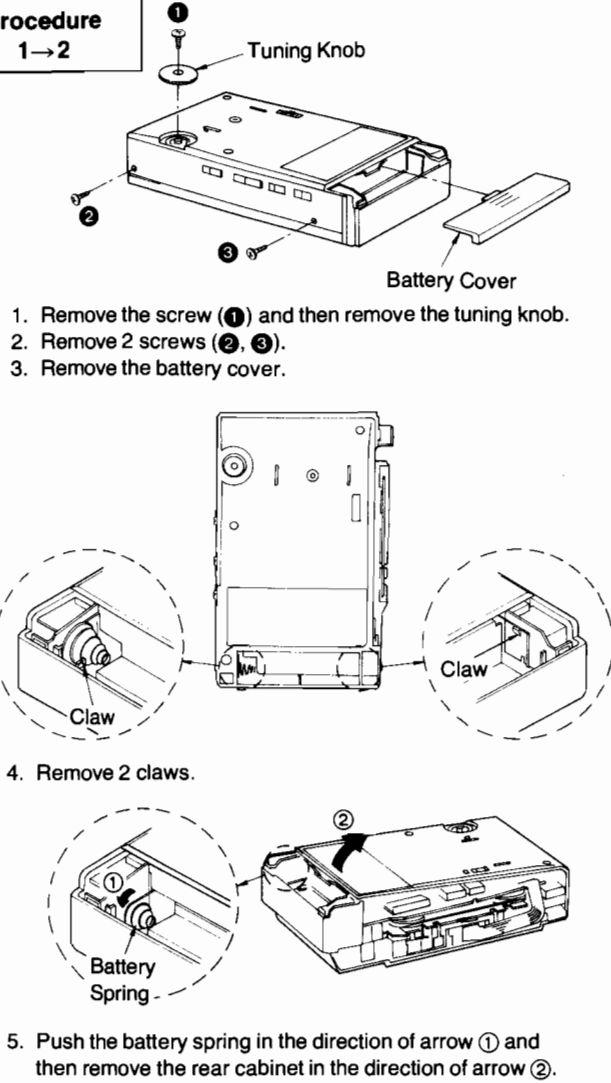
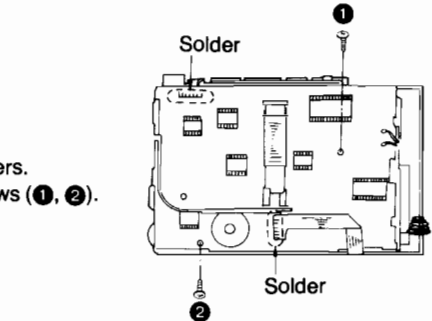
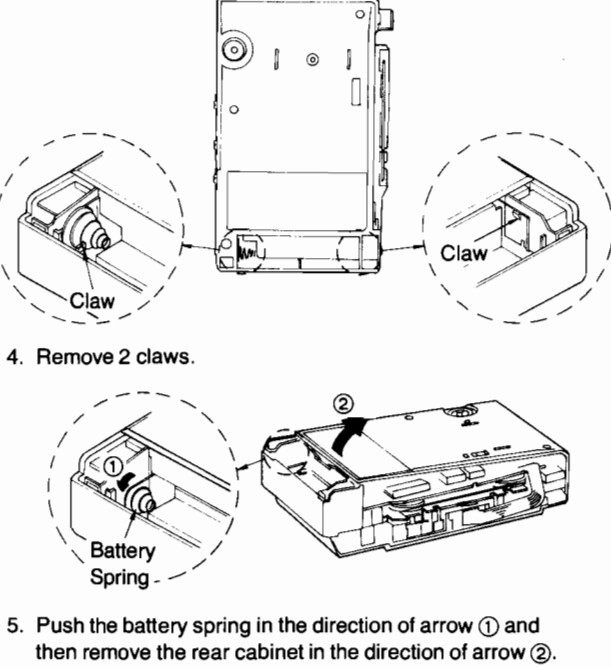
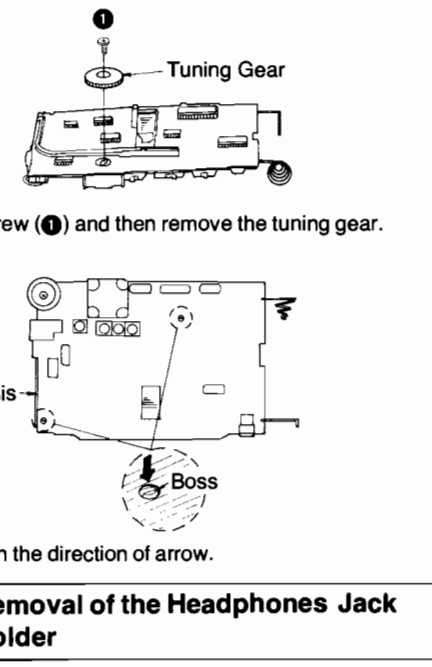
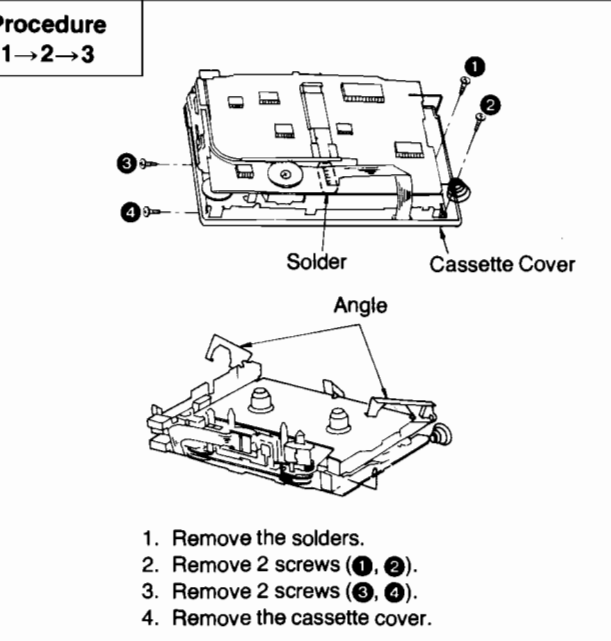
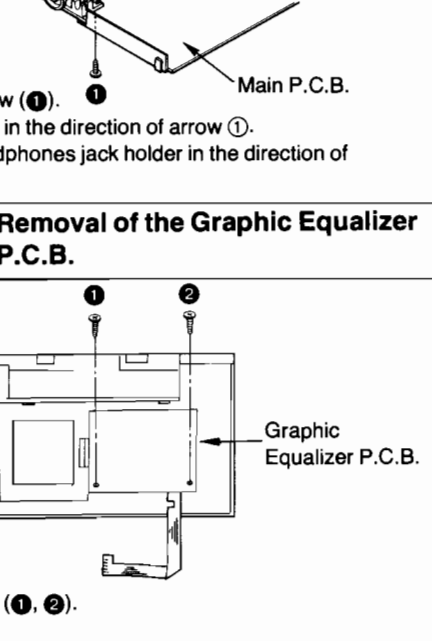
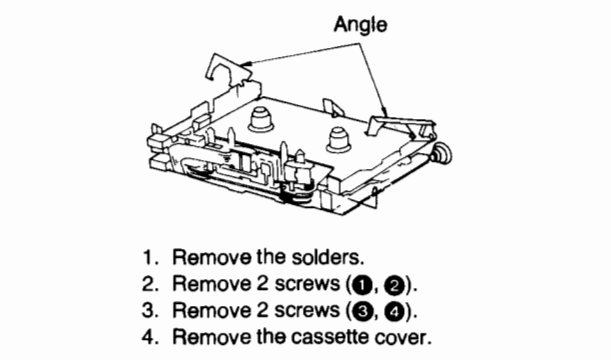
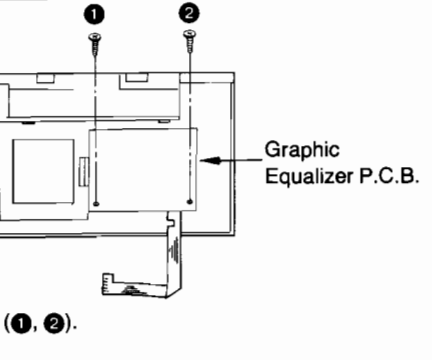
## BELT CLIP

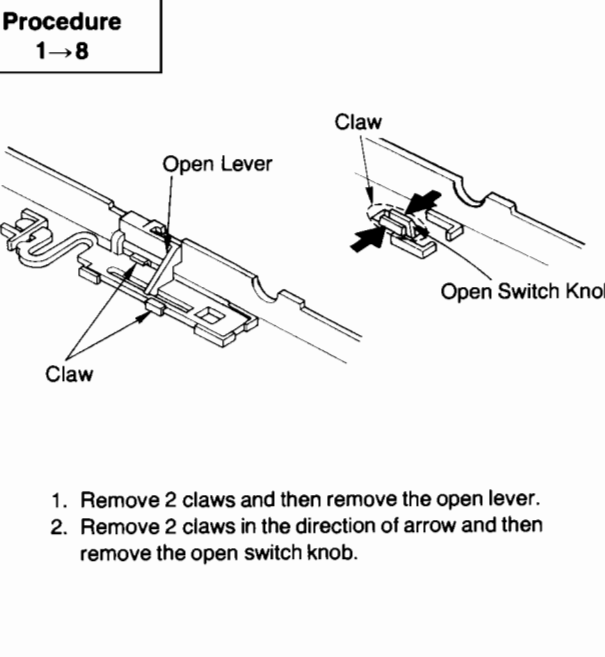
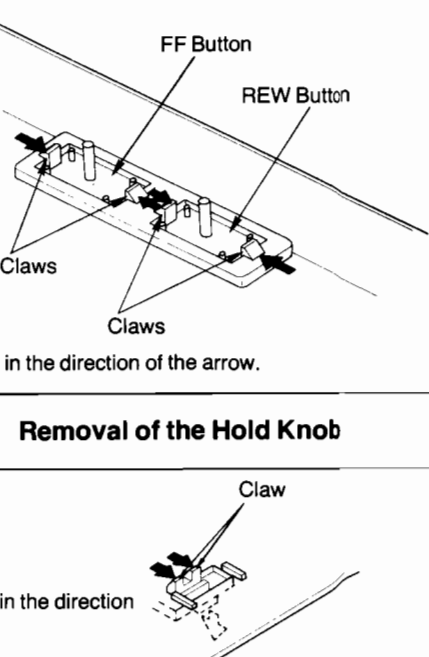
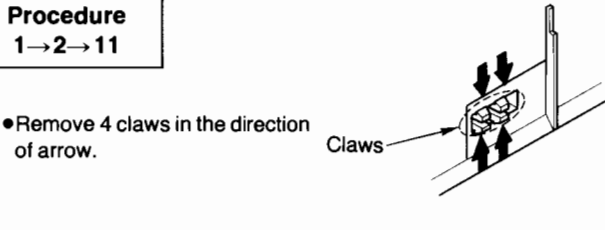
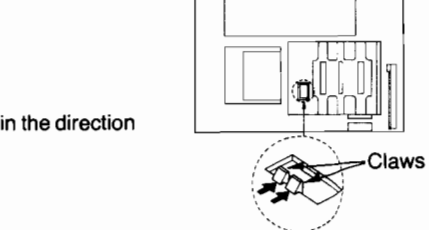




# DISASSEMBLY INSTRUCTIONS

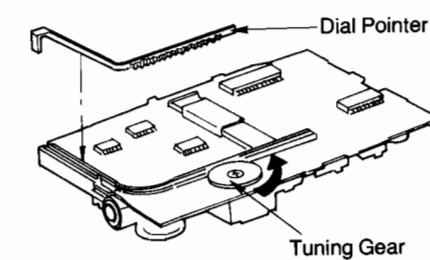
Ref. No. 1	Removal of the Side Cabinet	
Procedure 1		
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Side Cabinet</p> <p>Open Button ❷</p> </div> <div style="text-align: center;"> <p>Side Cabinet</p> </div> </div>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>1. Slide the open button and then open the cassette cover.</p> <p>2. Remove 2 screws (❶, ❷).</p> </div> <div style="width: 45%;"> <p>3. Remove the side cabinet in the direction of the arrow.</p> </div> </div>		



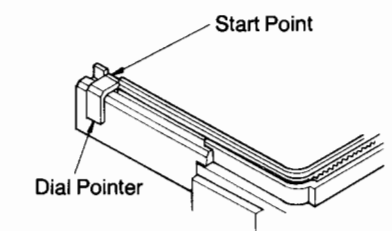
Ref. No. 2	<b>Removal of the Rear Cabinet</b>	Ref. No. 4	<b>Removal of the Main P.C.B.</b>
Procedure 1→2	 <p>1. Remove the screw (1) and then remove the tuning knob. 2. Remove 2 screws (2, 3). 3. Remove the battery cover.</p> <p>4. Remove 2 claws.</p> <p>5. Push the battery spring in the direction of arrow 1 and then remove the rear cabinet in the direction of arrow 2.</p>	Procedure 1→2→4	 <p>1. Remove 2 solders. 2. Remove 2 screws (1, 2).</p>
Ref. No. 5	<b>Removal of the Dial Chassis</b>	Ref. No. 5	<b>Removal of the Dial Chassis</b>
Procedure 1→2→3→4→5	 <p>1. Remove the screw (1) and then remove the tuning gear.</p> <p>2. Push the boss in the direction of arrow.</p>	Procedure 1→2→3→4→5	 <p>1. Remove the screw (1) and then remove the tuning gear.</p> <p>2. Push the boss in the direction of arrow.</p>
Ref. No. 3	<b>Removal of the Cassette Cover</b>	Ref. No. 6	<b>Removal of the Headphones Jack Holder</b>
Procedure 1→2→3	 <p>1. Remove the screw (1). 2. Remove the LED in the direction of arrow 1. 3. Remove the headphones jack holder in the direction of arrow 2.</p>	Procedure 1→2→3→4→6	 <p>1. Remove the screw (1). 2. Remove the LED in the direction of arrow 1. 3. Remove the headphones jack holder in the direction of arrow 2.</p>
Ref. No. 7	<b>Removal of the Graphic Equalizer P.C.B.</b>	Ref. No. 7	<b>Removal of the Graphic Equalizer P.C.B.</b>
Procedure 1→2→3→7	 <p>1. Remove the solders. 2. Remove 2 screws (1, 2). 3. Remove 2 screws (3, 4). 4. Remove the cassette cover.</p>	Procedure 1→2→3→7	 <p>1. Remove the solders. 2. Remove 2 screws (1, 2). 3. Remove 2 screws (3, 4). 4. Remove the cassette cover.</p>

Ref. No. 8	<b>Removal of the Open Switch Knob</b>	Ref. No. 9	<b>Removal of the FF and REW Button</b>
Procedure 1→8	 <p>1. Remove 2 claws and then remove the open lever. 2. Remove 2 claws in the direction of arrow and then remove the open switch knob.</p>	Procedure 1→9	 <p>•Remove 4 claws in the direction of the arrow.</p>
Ref. No. 11	<b>Removal of the Selector, REV. mode and Dolby Knobs</b>	Ref. No. 10	<b>Removal of the Hold Knob</b>
Procedure 1→2→11	 <p>•Remove 4 claws in the direction of arrow.</p>	Procedure 1→2→10	 <p>•Remove 2 claws in the direction of arrow.</p>
Ref. No. 12	<b>Removal of the XBS Knob</b>	Ref. No. 12	<b>Removal of the XBS Knob</b>
Procedure 1→2→3→7→12	 <p>•Remove 2 claws in the direction of arrow.</p>	Procedure 1→2→3→7→12	 <p>•Remove 2 claws in the direction of arrow.</p>

### ■ TO SET THE DIAL POINTER

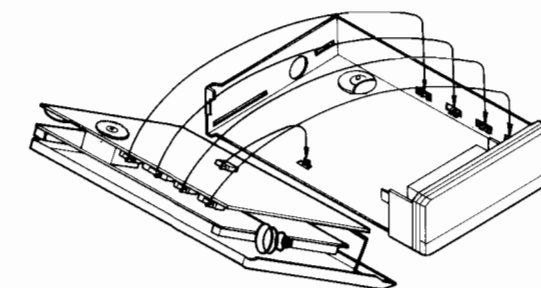


1. Fully turn the tuning gear in the direction of arrow.
2. Attach the dial pointer.



3. Align the dial pointer with the start point.

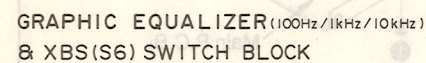
### ■ WHEN ASSEMBLING THE REAR CABINET



- Line up each switch with its respective switch boss as shown in the figure, and then attach the rear cabinet.



MAIN CIRCUIT





## CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

## Notes:

1. S1-1, S1-2: Reverse mode/Band select switch.  
S1-1; Band select switch in "FM STEREO" position.  
(F.S...FM STEREO, F...FM, A...AM)  
S1-2; Reverse mode select switch in "CD" position.
2. S2-1, S2-2: Function select switch in "TAPE" position.  
(T...TAPE, R...RADIO)
3. S3-1, S3-2: Dolby NR/FM sens. switch.  
S3-1; Dolby NR switch in "OFF" position.  
S3-2; FM sens. switch in "LOCAL" position.  
(L...LOCAL, D...DX)
4. S4-1~S4-3: FWD/REV mode detect switch in "FWD" position.  
(F...FWD, R...REV)
5. S5: Tape select switch in "NORMAL" position.  
(N...NORMAL, Cr...METAL/CrO<sub>2</sub>)
6. S6: XBS switch.
7. S7: Playback switch.
8. S8: Stop switch.
9. S9: FF/DIRECTION switch.
10. S10: REW switch.
11. S11: Playback switch.
12. S12: HOLD switch in "OFF" position.
13. VR1: FM VCO adjustment VR.
14. VR2: REV. tape speed adjustment VR.
15. VR3: FWD. tape speed adjustment VR.
16. VR101: Volume control VR (Lch).
17. VR201: Volume control VR (Rch).
18. Battery current: Vol. min. .... 33 mA (Radio)  
Vol. max. .... 70 mA (Radio)  
220 mA (Tape playback)

Measurement instruction  
(Radio: FM 60 dB, 30% Mod.)  
(Tape: 315 Hz, 0 dB)

18. DC voltage measurements are taken with electronic voltmeter.  
The negative terminal of the battery provides negative meter connection point.  
**No mark...PLAYBACK < >...FM ( )...AM**

•This schematic diagram may be modified at any time with the development of new technology.

→ ...FM SIGNAL LINE

→ ...FM/PLAYBACK SIGNAL LINE

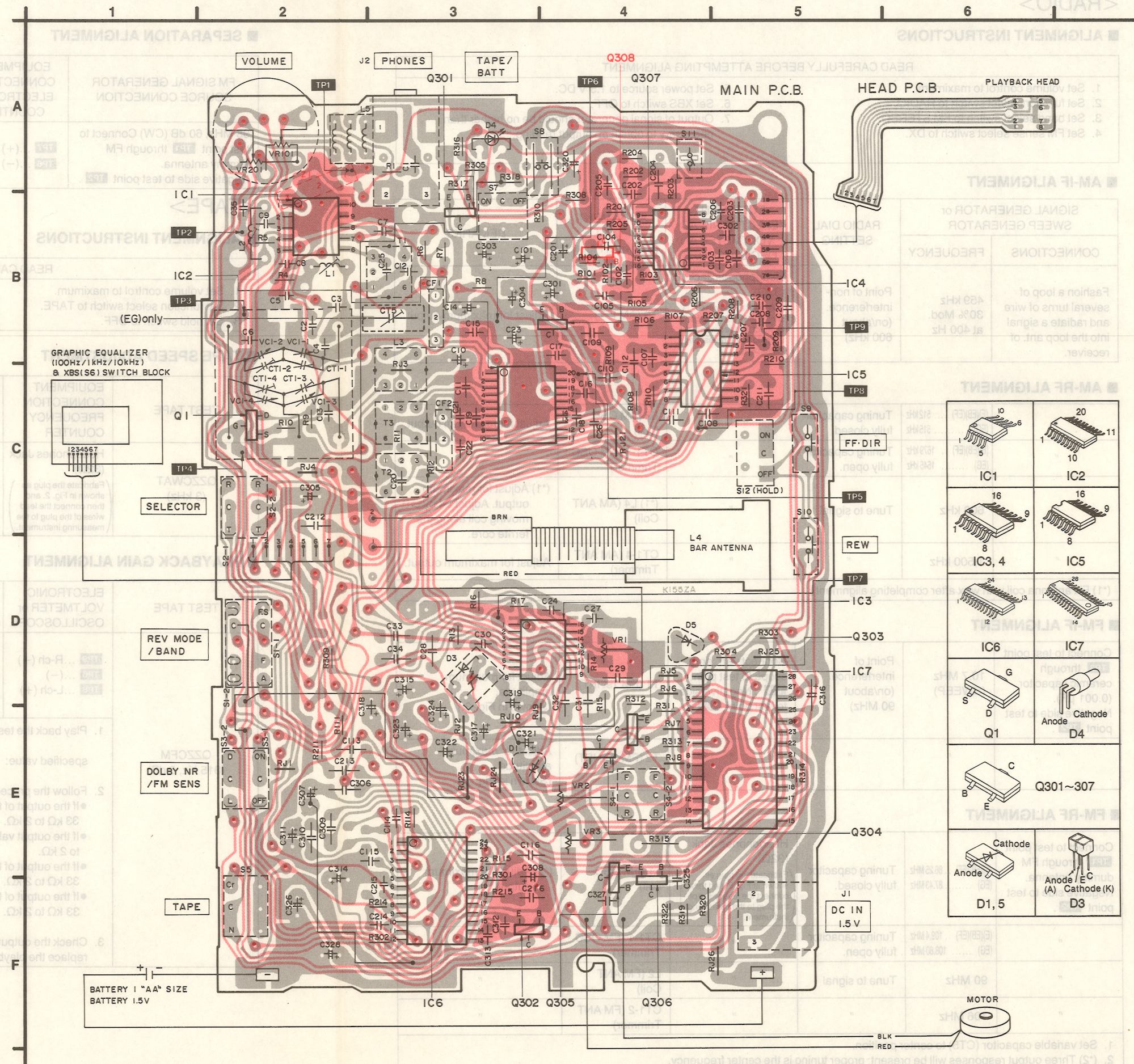
→ ...PLAYBACK SIGNAL LINE

→ ...+B LINE

## Notes:

1. The circuit shown in ( ) on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in ( ) on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.
4. \_\_\_\_\_: Chip resistor
5. \_\_\_\_\_: Chip jumper

•This circuit board diagram may be modified at any time with the development of new technology.





# MEASUREMENTS AND ADJUSTMENTS

## <RADIO>

### ■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set function select switch to RADIO. 3. Set band select switch to FM STEREO. 4. Set FM sense select switch to DX.	5. Set power source to 1.5 V DC. 6. Set XBS switch to OFF. 7. Output of signal generator should be no higher than necessary to obtain an output reading.

### ■ AM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	EQUIPMENT ELECTRONIC AC VOLTMETER or OSCILLOSCOPE	ALIGNMENT POINT (Shown in Fig. 1.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	459 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/about 600 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2. and then connect the lead wires of the plug to the measuring instrument.)	T3 (AM IFT)	Adjust for maximum output.

### ■ AM-RF ALIGNMENT

"	(E)(EB)(EF) ... 512 kHz (EG) ... 515 kHz	Tuning capacitor fully closed.	"	L3 (AM OSC Coil)	Adjust for maximum output.
"	(E)(EB)(EF) ... 1679 kHz (EG) ... 1645 kHz	Tuning capacitor fully open.	"	CT1-3 (AM OSC Trimmer)	"
"	600 kHz	Tune to signal	"	(*1) L4 (AM ANT Coil)	(*1) Adjust for maximum output. Adjust L4 by moving coil along the ferrite core.
"	1,500 kHz	"	"	CT1-4 (AM ANT Trimmer)	Adjust for maximum output.

(\*1) Fix antenna coil with wax after completing alignment.

### ■ FM-IF ALIGNMENT

Connect to test point TP3 through ceramic capacitor (0.001 μF). Negative side to test point TP2.	10.7 MHz (SWEEP)	Point of interference (on/about 90 MHz)	Connect vert. amp. scope to test point TP5. Negative side to test point TP6.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Shown in Fig. 3.)
"	"	"	"	T2 (FM 2nd IFT)	Adjust for maximum amplitude. (Shown in Fig. 4.)

### ■ FM-RF ALIGNMENT

Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2.	(E)(EB)(EF) ... 86.25 MHz (EG) ... 87.43 MHz	Tuning capacitor fully closed.	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2. and then connect the lead wires of the plug to the measuring instrument.)	L1 (FM OSC coil)	(*2) Adjust for maximum output.
"	(E)(EB)(EF) ... 109.4 MHz (EG) ... 108.60 MHz	Tuning capacitor fully open.	"	CT1-1 (FM OSC Trimmer)	"
"	90 MHz	Tune to signal	"	L2 (FM ANT Coil)	"
"	106 MHz	"	"	CT1-2 (FM ANT Trimmer)	"

1. Set variable capacitor (CT5) to center position.  
2. (\*2) Three output responses will be present; proper tuning is the center frequency.

### ■ SEPARATION ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ALIGNMENT POINT	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2.	TP7 ... (+) TP6 ... (-)	VR1 (Shown in Fig. 5.)	19 kHz ± 100 Hz	Adjust VR1, for 19 kHz ± 100 Hz reading on frequency counter.

## <TAPE>

### ■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set function select switch to TAPE. 3. Set hold switch to OFF.	4. Set DOLBY NR switch to OFF. 5. Set tape select switch to NORMAL. 6. Set power source voltage to 1.5 V DC.

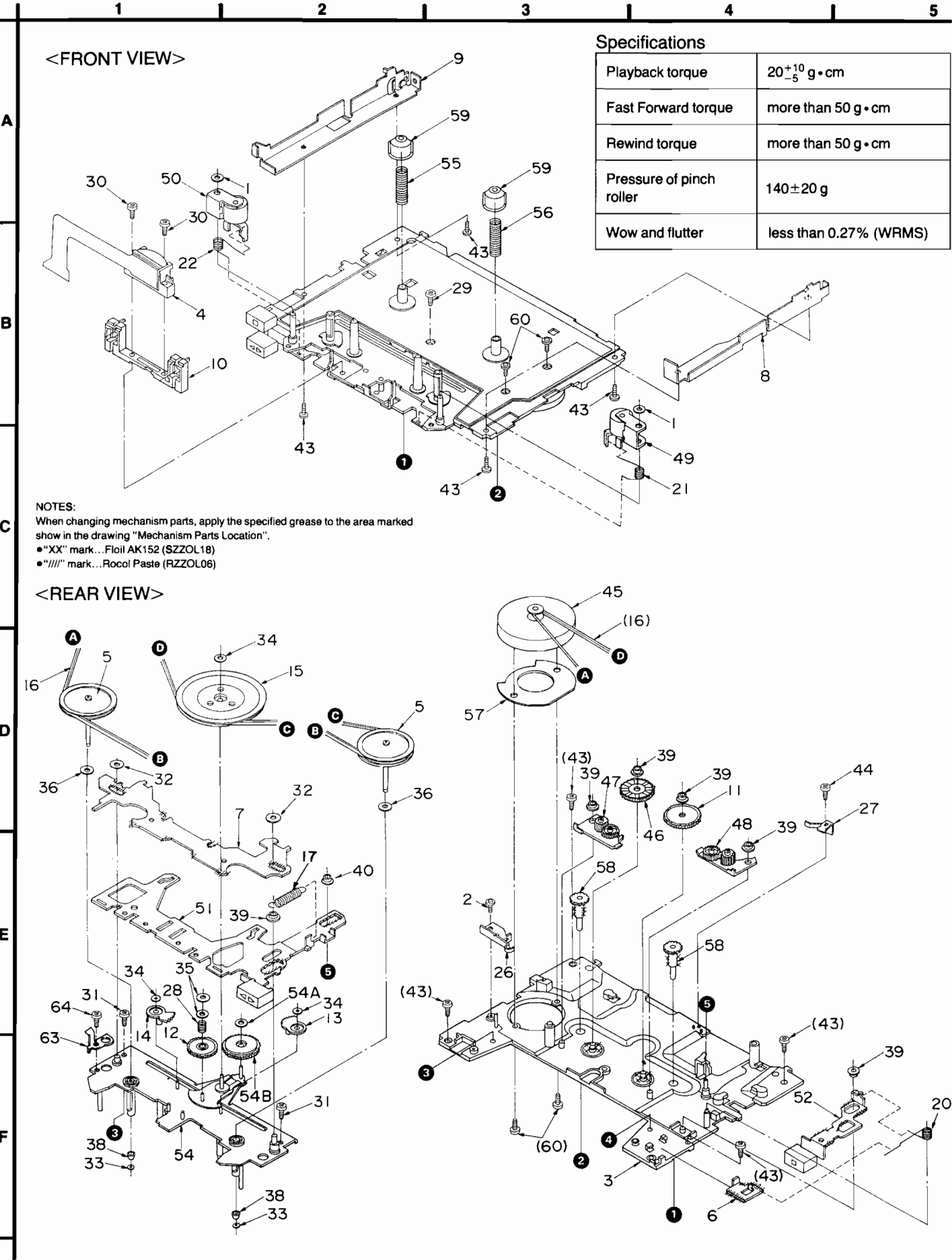
### ■ TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION FREQUENCY COUNTER	SPECIFICATION	ADJUSTMENT	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 2. and then connect the lead wires of the plug to the measuring instrument.)	3,000 ± 30 Hz	VR3...FWD VR2...REV (Shown in Fig. 5.)	Playback mode.

### ■ PLAYBACK GAIN ALIGNMENT

TEST TAPE	ELECTRONIC VOLTMETER or OSCILLOSCOPE	SPECIFICATION	ADJUSTMENT	REMARKS
QZZCFM (315 Hz, 0 dB)	TP9 ... R-ch (+) TP6 ... (-) TP8 ... L-ch (+)	17.5 mV ± 1 dB	R206, R207 (R-ch) R106, R107 (L-ch) (Refer to circuit board and wiring connection diagram.)	<p>1. Play back the test tape and check if the output values are within the value specified. specified value: 17.5 mV ± 1 dB</p> <p>2. Follow the procedure below if the output values are not within the specified value.</p> <ul style="list-style-type: none"> <li>● If the output of the R-ch is higher than the specified value, change the resistance value of R206 from 33 kΩ to 2 kΩ.</li> <li>● If the output value of the R-ch is lower than the specified value, change the value of R207 from 33 kΩ to 2 kΩ.</li> <li>● If the output of the L-ch is higher than the specified value, change the resistance value of R106 from 33 kΩ to 2 kΩ.</li> <li>● If the output of the L-ch is lower than the specified value, change the resistance value of R107 from 33 kΩ to 2 kΩ.</li> </ul> <p>3. Check the output values in forward and reverse playback. If the values are not within the specification, replace the playback head.</p>

MECHANISM PARTS LOCATION



■ ALIGNMENT POINT

\*Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

MAIN P.C.B.

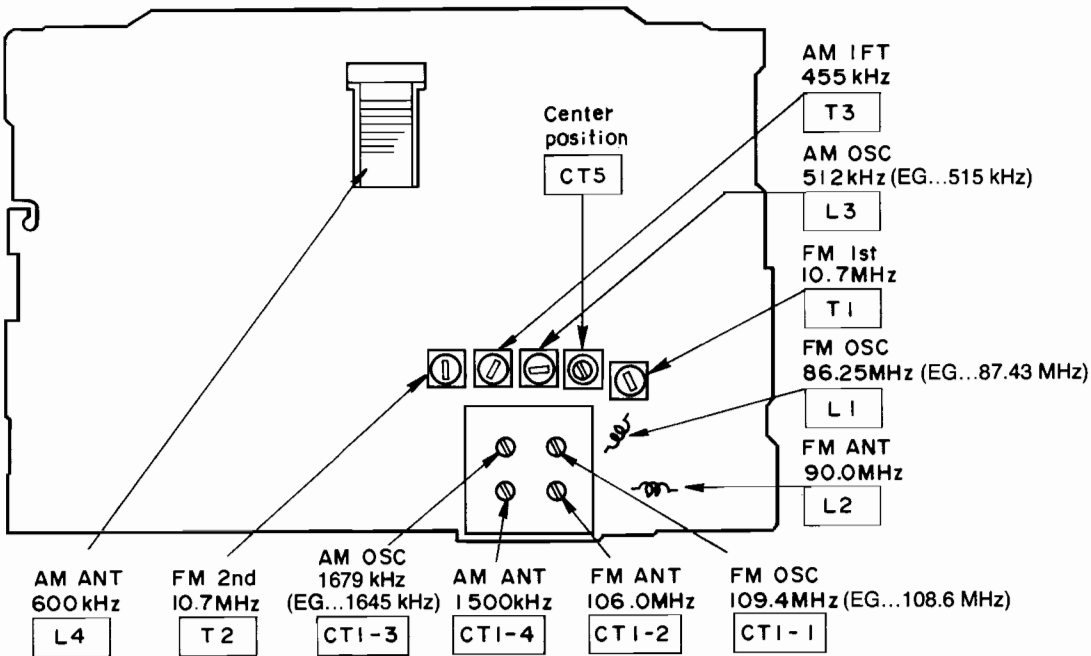


Fig. 1

MAIN P.C.B.

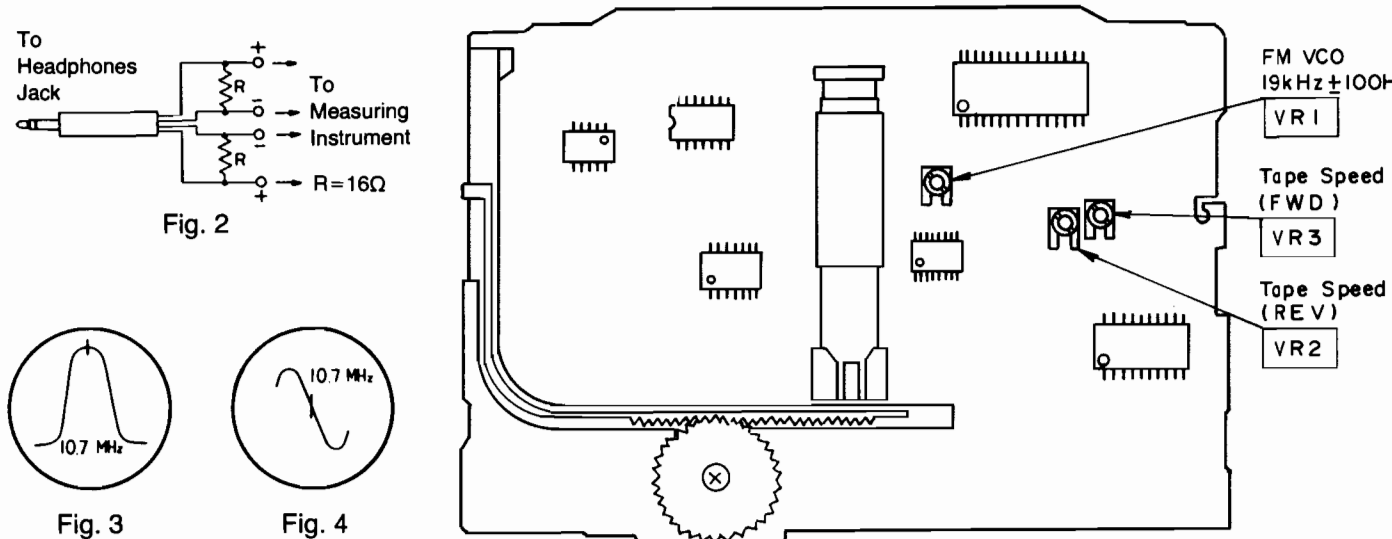


Fig. 5

\* Tape Pass Control

This unit uses the TPC system making the head azimuth adjustment unnecessary.

•TPC System Outline

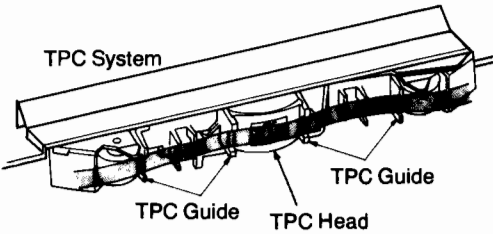



Fig. 6

The TPC guides on both sides of the head and on one side of the pinch rollers are installed in such a way (see Fig. 6) that the tape will run evenly and along the headgap at the right angle. The head azimuth adjustment is therefore unnecessary; there are no head azimuth adjustment screws. The TPC guides on one side of the pinch rollers also control the disturbance caused by the tape width and speed in the forward and reverse mode.

REPLACEMENT PARTS LIST

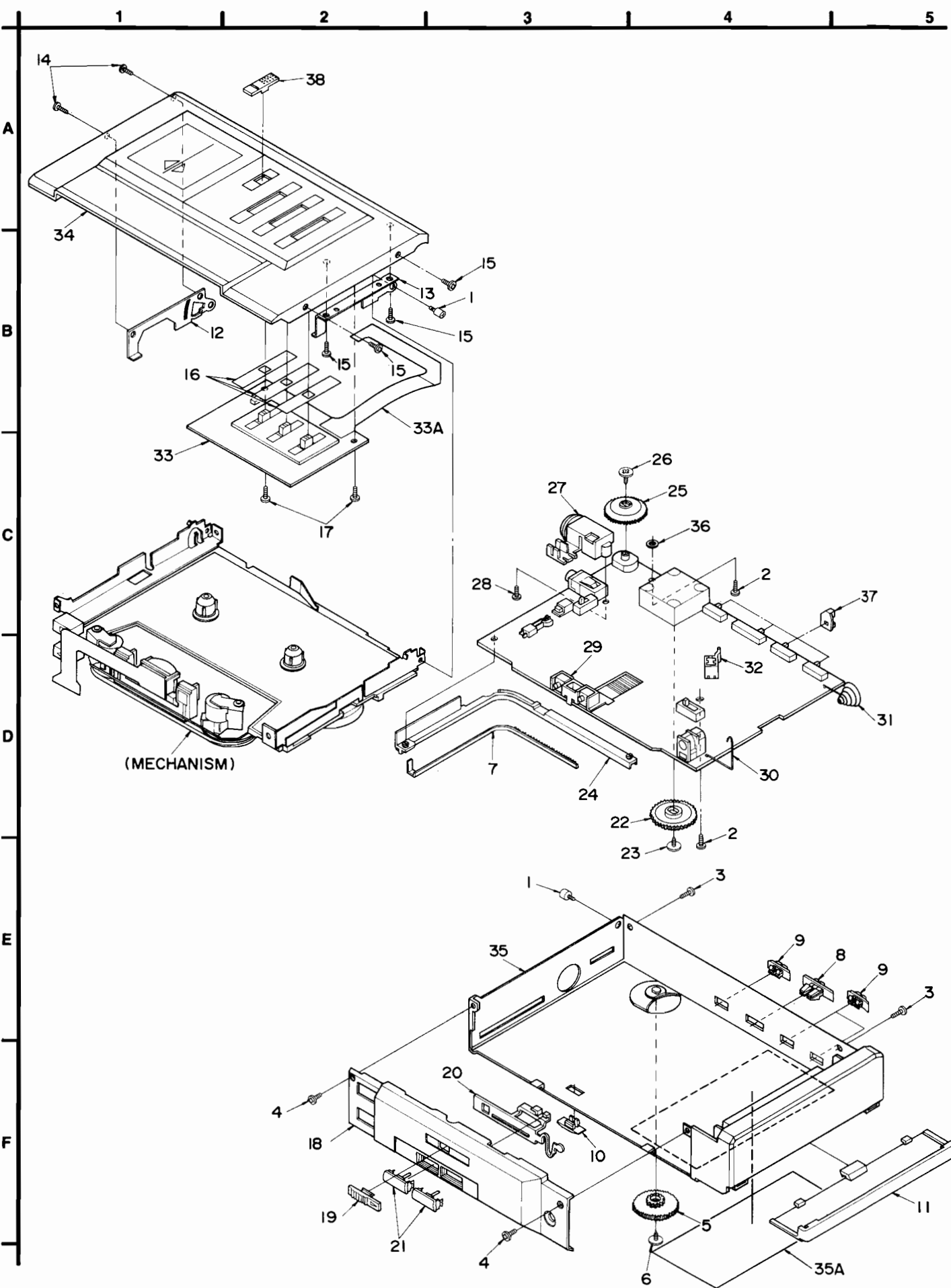
Notes : \* Important safety notice :  
Components identified by  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.  
\* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)  
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			COILS AND TRANSFORMERS		
IC1	AN7202S	I.C. FRONT END	L1	RL04N245-0	COIL
IC2	BA4230AFST2	I.C. I.F. AMP/OSC/DET	(EG)		
IC3	BA1362FST2	I.C. FM MPX	L1	RL04Y148	COIL
IC4	BA3413FST2	I.C. PRE AMP/SWITCHING	(E, EB, EF)		
IC5	TA7793FEL	I.C. DOLBY	L2	RL04Y166-0	COIL
IC6	TA8157FEL	I.C. POWER AMP	L3	RL02A002-M	COIL
IC7	AN6611ST2	I.C. MOTOR CONT.	L4	RLV2N002-0	BAR ANTENNA
TRANSISTORS			L5	RLQUR63K	COIL
Q1	2SK160K4T2	TRANSISTOR	T1	RLI4A27	I.F. TRANSFORMER
Q301	2SB815TA	TRANSISTOR	T2	RLK4A001-M	AF TRANSFORMER
Q302	2SB815TA	TRANSISTOR	T3	RLI2A40-M	I.F. TRANSFORMER
Q303	2SB708S	TRANSISTOR	COMPONENT COMBINATIONS		
Q304	2SD601R	TRANSISTOR	Z1	RXABPMB8	COMPONENTS COMBINATION
Q305	2SB1295TA	TRANSISTOR	FILTERS		
Q306	2SB1295TA	TRANSISTOR	CF1	QCRZ107MA5	CERAMIC FILTER
Q307	RVTDT143TKT	TRANSISTOR	CF2	RVFPFA459A	CERAMIC FILTER
DIODES			SWITCHES		
D1	MA721TW	DIODE	S1	RSS3B32Z	SW. REC MODE/BAND
D3	RVSGP2509B	COMPONENT COMBINATION	S2	RSS2B56Z	SW. FUNCTION
D4	RVDSL22VR3F	L.E.D	S3	RSS2B56Z	SW. DOLBY/FM SENS.
D5	SB00703CPTB	DIODE	S4	ESD1132255	SW. FWD/REV MODE
VARIABLE RESISTORS			S5	RSS2B56Z	SW. TAPE
VR1	RVNEA14B1XF	V.R. FM VCO	S6	RSS2A61YA-L	SW. XBS
VR2	RVNEA53B1XF	V.R. TAPE SPEED(REV)	S7	ESD1132255	SW. PLAYBACK
VR3	RVNEA53B1XF	V.R. TAPE SPEED(FWD)	S8	RSH1A87ZA-H	SW. STOP
VR101	EVUBAAT50A54	V.R. VOLUME	S9	RSG0001	SW. FF/DIRECTION
VR201	EVUBAAT50A54	V.R. VOLUME	S10	RSG0001	SW. REW
VARIABLE CAPACITORS			S11	RSH1A001-U	SW. PLAYBACK
CT5	ECRKN010C21	TRIMMER CAPACITOR	S12	RSS2A61YA-L	SW. HOLD
(EG)			OTHERS		
VC1	RCV4PCT6V-M	VARIABLE CAPACITOR	J1	RJJB2Z	JACK, DC IN
			J2	RJJD35SZ	JACK, HEADPHONS

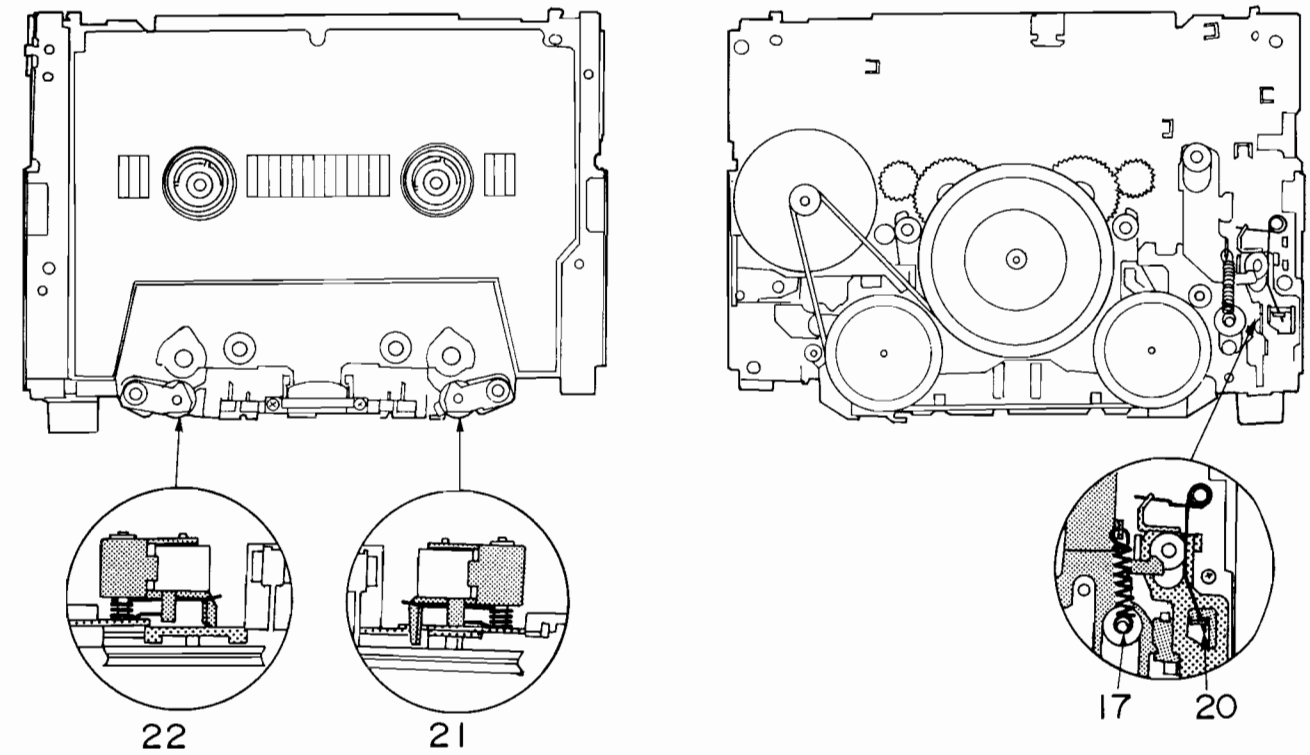
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CABINET AND CHASSIS			25	RBT325ZA-0	KNOB, VOLUME
1	RHE5123Y	SCREW	26	XSHR17-2FZ	SCREW
2	RHE5079Z	SCREW	27	RMPK16ZA-0	HOLDER
3	RHE5097Z	SCREW	28	RHE5079Z	SCREW
4	RHEK5008ZA	SCREW	29	RMMK3ZA	HOLDER
5	RBTK19ZA-0	KNOB, TUNING	30	RJCK30004ZA	BATT. TERMINAL
6	RHE5119YA	SCREW	31	RJCK70004ZA	BATT. SPRING
7	RDPK535ZA-0	DIAL POINTER	32	RHR1382ZA	HOLDER
8	RYTQV340E	BUTTON, REV MODE/BAND	33	QEMK1146	G.EQ ASS'Y
9	RBDK77ZA-0	KNOB, SELECTOR/DOLBY	33A	RUPK156ZA	P.C.B
10	RBDK81ZA-0	KNOB, HOLD	34	RYQVQ340E	CASSETTE LID
11	RKKK27ZA-0	BATT. COVER	35	RYFQV340E	REAR CABINET ASS'Y
12	RULK29ZA	ANGLE	(E)		
13	RYEQV340E	ANGLE ASS'Y	35	RYFQV340EB	REAR CABINET ASS'Y
14	RHE5101Y	SCREW	(EB, EF)		
15	RHEK5008ZA	SCREW	35	RYFQV340EG	REAR CABINET ASS'Y
16	RHRK2004ZA	SHEET	(EG)		
17	RHE5119YA	SCREW	35A	RGTK90WA-0	NAME PLATE
18	RKMK60ZA-0	SIDE CABINET	(EG)		
19	RBDK78ZA-0	BUTTON, OPEN	35A	RGTK90YA-0	NAME PLATE
20	RUBK25ZA	LEVER	(E)		
21	RGU0013-S	BUTTON, FF/DIR, REV	35A	RGTK90ZA-0	NAME PLATE
22	RDGK5630ZA	GEAR	(EB, EF)		
23	XSHR17-2FZ	SCREW	36	RMMK2021ZA	WASHER
24	RUAK61ZA	CHASSIS	37	RHRK548ZA	SPACER
			38	RBDK80YA-0	KNOB, XBS

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
PACKING MATERIAL			P6	RPEK178ZA	SPACER
P1	RPKK1136ZA	GIFT BOX	P7	RPEK162ZA	SHEET
P2	RPNK3069ZA	CUSHION	ACCESSORIES		
P3	RPEK176ZA	PAD	A1	RP-HV134SY-0	HEADPHONE
P4	RPEK177ZA	SHEET	A2	1KEAKV320ZA0	BELT CLIP ASS'Y
P5	RPEK119ZA	CUSHION	A3	RQXK4119ZA	INST. MANUAL

CABINET PARTS LOCATION



## ■ SPRING LOCATION



## ■ SPRING ILLUSTRATION


The illustration shows the actual size of the springs so it can be used to check their shapes.  
(The illustration shows the springs separated from the mechanism.)



## ■ REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CASSETTE DECK			32	QBK92126	WASHER
1	QBW2129	WASHER	33	RNW103ZA	WASHER
2	XQN14+CQ25FZ	SCREW	34	RNW137ZA	WASHER
3	RFU170ZB	CHASSIS ASS'Y	35	RNW142ZA	WASHER
4	1JH0036ZAM	HEAD ASS'Y	36	RNW1520ZA	WASHER
5	1DWAKAR40RZA	FLYWHEEL ASS'Y	38	RHRK547ZA	SPACER
6	RNR82ZA	ANGLE	39	RHR1282Z	BUSHING
7	RNR84ZB	ROD	40	RHR3376ZA	BUSHING
8	RMA0011	ANGLE	43	RHE5097ZB	SCREW
9	RMA0010	ANGLE	44	XQN16+AQ16	SCREW
10	RUGK9ZA	HOLDER	45	RWEQV340E	MOTOR ASS'Y
11	RNG140ZA	GEAR	46	1NGAKAR40RZA	GEAR ASS'Y
12	RNG145ZB	GEAR	47	1NLAKAR40RZA	LEVER ASS'Y
13	RNG146ZA	GEAR	48	2NLAKAR40RZA	LEVER ASS'Y
14	RNG147ZA	GEAR	49	1NLAKAR40PZA	PINCH ROLLER ASS'Y
15	RDR147ZB	PULLEY	50	2NLAKAR40PZA	PINCH ROLLER ASS'Y
16	RDV112ZA	BELT	51	1NRAKAR40PZA	BUTTON ASS'Y, PLAY
17	RUD127ZB	SPRING	52	2NRAKAR40RZA	BUTTON ASS'Y, STOP
20	RUN201ZA	SPRING	54	1UAAKAR40RZB	CHASSIS ASS'Y
21	RUN202ZA	SPRING	54A	RNW137ZA	WASHER
22	RUN203ZA	SPRING	54B	2NGAKAR40RZB	GEAR
26	RUS772ZA	SPRING	55	RUQ120ZA	SPRING
27	RUA776ZA	SPRING	56	RUQ121ZA	SPRING
28	RUQ117ZA	SPRING	57	RMC1229ZB	SHIELD PLATE
29	XQN14+C25FZ	SCREW	58	RNG139ZA	GEAR
30	XQN14+CM6.5	SCREW	59	RDM25ZA	REEL TABLE
31	XQS14+A25FZ	SCREW	60	XQN17+A18FZ	SCREW
			63	RUS775ZA	SPRING
			64	XQN14+C22FZ	SCREW

RESISTORS & CAPACITORS

Notes : \* Important safety notice : Components identified by  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.  
\* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)  
Parts without these indications can be used for all areas.

Numbering System For Resistors

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1KΩ)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470Ω)

Numbering System For Capacitors

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001μF)	Tolerance	Unique
ECEA	50	M		330
Type	Voltage (50V)	Characteristics	Value (33μF)	

- Capacity values are in microfarads (μF) unless specified otherwise, P= Pico-farads (pF) F= Farads (F).
- Resistance values are in ohms (Ω), unless specified otherwise, 1K = 1,000Ω, 1M = 1,000kΩ

Resistor Type		Wattage		Tolerance
ERD	: Carbon	10 : 1/8W	12 : 1/2W	J : ±5%
ERG	: Metal Oxide	14 : 1/4W	25 : 1/4W	F : ±1%
ERQ	: Fuse Type Metal	1A : 1W	18 : 1/8W	G : ±2%
ERX	: Metal Film	S2 : 1/4W	S1 : 1/2W	J : ±5%
ERD L	: Carbon (chip)	2F : 1/4W	50 : 1/2W	K : ±10%
ERO K	: Metal Film (chip)	2A : 2W	3A : 3W	M : ±20%
ERC	: Solid	6G : 1/10W	8G : 1/8W	
ERF	: Incombustible Box-Shaped			
ERM	: Wire-Wound			
RRJ	: Chip Resistor			
ERJ	: Chip Resistor			

Capacitor Type		Voltage		Tolerance
ECE	: Electrolytic	0J : 6.3V	1A : 10V	K : ±10%
ECCD	: Ceramic	1C : 16V	1E : 25V	M : ±20%
ECKD	: Ceramic Capacitor	1H : 50V	1V : 35V	Z : +80 % -20 %
EQM	: Polyester	50 : 50V	05 : 50V	J : ±5%
EQP	: Polypropylene	2H : 500V	2A : 100V	G : ±2%
ECG	: Ceramic	1 : 100V	1J : 63V	F : ±1%
ECEA N	: Non Polar Electrolytic	KC : 400V AC		C : ±0.25pF
QCU	: Ceramic (Chip Type)	KC : 125V AC		D : ±0.5pF
ECUX	: Ceramic (Chip Type)	(UL)		
ECF	: Semiconductor			
EECW	: Liquid electrolyte double layer capacitor			

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
C103	RCUV1H681KB	680P 50	C207	RCUV1H332MB	0.0033 50	C311	ECEA0GKS470L	47 4
C104	ECUV1C224KR	0.22 16	C208	RCUV1H822MB	0.0082 50	C312	RCUV1E223MB	0.022 25
C105	RCUV1E223MB	0.022 25	C209	ECUV1C105ZF	1 16	C313	ECEA1HKDR47L	0.47 50
C106	RCUV1H681KB	680P 50	C210	RCUV1E103MB	0.01 25	C313	RCUV1H101KB	100 50
C107	RCUV1H332MB	0.0033 50	C211	ECUV1C474ZF	0.47 16	C314	ECEA1EKS4R7L	4.7 25
C108	RCUV1H822MB	0.0082 50	C212	ECUV1C105ZF	1 16	C315	ECEA1HKS3R33	0.33 50
C109	ECUV1C105ZF	1 16	C213	ECUV1C105ZF	1 16	C316	ECST1CY105L	1 16
C110	RCUV1E103MB	0.01 25	C214	RCUV1E153KB	0.015 25	C317	ECEA1HKS3R33	0.33 50
C111	ECUV1C474ZF	0.47 16	C215	RCUV1H681KB	680P 50	C318	ECEA1HKS1R1L	0.1 50
C112	ECUV1C105ZF	1 16	C216	ECUV1C105ZF	1 16	C320	ECSTUCY105R	1 16
C113	ECUV1C105ZF	1 16	C301	ECEA0GKS470L	47 4	C321	ECEA0GKS101L	100 4
C114	RCUV1E153KB	0.015 25	C302	RCUV1H681KB	680P 50	C322	ECEA1HKS010L	1 50
C115	RCUV1H681KB	680P 50	C303	ECEA1CKD100L	10 16	C323	ECEA1EKS4R7L	4.7 25
C116	ECUV1C105ZF	1 16	C304	ECEA0GKS220L	22 4	C324	ECEA1EKS4R7L	4.7 25
C201	ECEA0DKD470L	47 2	C305	ECEA0GKS221L	220 4	C325	RCUV1E103MB	0.01 25
C202	RCUV1E103KB	0.01 25	C306	ECUV1C474ZF	0.47 16	C326	ECEA0DPD331I	330 2
C203	RCUV1H681KB	680P 50	C307	ECEA1EK3R3	3.3 25	C327	RCUV1E103MB	0.01 25
C204	ECUV1C224KR	0.22 16	C308	ECST0GY335R	3.5 4	C328	ECEA0DPD331I	330 2
C205	RCUV1E223MB	0.022 25	C309	ECUV1C474ZF	0.47 16	C329	RCBC1H101KBY	100P 50
C206	RCUV1H681KB	680P 50	C310	ECUV1C105ZF	1 16	C329	RCBC1H101KBY	100P 50

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
RESISTORS(VALUE, WATTAGE)			R215	RRJ6GCJ100TE	10 1/10	C4	RCUV1H150XC	15P 50V
R1	RRJ6GCJ101TE	100 1/10	R301	RRJ6GCK1R0TE	1 1/10	(EG)		
R4	RRJ6GCJ102TE	1K 1/10	R302	RRJ6GCJ103TE	10K 1/10	C4	RCUV1H180KC	18P 50
R5	RRJ6GCJ330	33 1/10	R303	RRJ6GCJ104TE	100K 1/10	(E, EB, EF)		
R6	RRJ6GCJ470TE	47 1/10	R304	RRJ6GCJ224TE	220K 1/10	C5	RCUV1E103MB	0.01 25
R7	RRJ6GCJ221TE	220 1/10	R305	RRJ6GCJ472TE	4.7K 1/10	C6	RCUV1H180KC	18P 50
R8	RRJ6GCJ683TE	68K 1/10	R308	RRJ6GCJ103TE	10K 1/10	(E, EB, EF)		
R9	RRJ6GCJ331TE	330 1/10	R309	RRJ6GCJ330	33 1/10	C6	RCUV1H240KC	24P 50
R10	RRJ6GCJ101TE	100 1/10	R310	RRJ6GCJ104TE	100K 1/10	(EG)		
R11	RRJ6GCJ102TE	1K 1/10	R311	RRJ6GCJ821TE	820 1/10	C7	RCUV1E103MB	0.01 25
R12	RRJ6GCJ471TE	470 1/10	R312	RRJ6GCJ5R6TE	5.6 1/10	C8	RCUV1E223MB	0.022 25
R13	RRJ6GCJ102TE	1K 1/10	R313	RRJ6GCJ821TE	820 1/10	C9	RCUV1E103MB	0.01 25
R14	RRJ6GCJ822	8.2K 1/10	R314	RRJ6GCJ272TE	2.7K 1/10	C10	ECEA0GKS220L	22 4
R15	RRJ6GCJ102TE	1K 1/10	R315	ERSA10J102	1K 1/8	C11	RCUV1E223MB	0.022 25
R16	RRJ6GCJ123TE	12K 1/10	R316	RRJ6GCJ471TE	470 1/10	C12	RCUV1E103MB	0.01 25
R17	RRJ6GCJ123TE	12K 1/10	R317	RRJ6GCJ472TE	4.7K 1/10	C13	RCUV1H100KC	10P 50
R101	RRJ6GCJ181TE	180 1/10	R318	RRJ6GCJ470TE	47 1/10	(E, EB, EF)		
R102	RRJ6GCJ682TE	6.8K 1/10	R319	RRJ6GCK1R5TE	1.5 1/10	C13	RCUV1H120KC	12P 50
R103	RRJ6GCJ184TE	180K 1/10	R320	ERSA39JR30	0.3	(EG)		
R104	RRJ6GCJ222TE	2.2K 1/10	R321	RRJ6GCJ183TE	18K 1/10	C14	ECEA1CKS100	10 16
R105	RRJ6GCJ392	3.9K 1/10	R322	RRJ6GCK1R5TE	1.5 1/10	C15	RCUV1E103MB	0.01 25
R106	RRJ6GCJ333	33K 1/10	RJ1	RRJ6GCJ000TE		C16	RCUV1E223MB	0.022 25
R107	RRJ6GCJ333	33K 1/10	RJ2	RRJ6GCJ000TE		C17	RCUV1H471KB	470P 50
R108	RRJ6GCJ101TE	100 1/10	RJ3	RRJ6GCJ000TE		C18	RCUV1E223MB	0.022 25
R109	RRJ6GCJ133TE	13K 1/10	RJ4	RRJ6GCJ000TE		C19	RCUV1E223MB	0.022 25
R110	RRJ6GCJ394TE	390K 1/10	RJ5	RRJ6GCJ000TE		C20	RCUV1H151KB	330P 50
R111	RRJ6GCJ471TE	470 1/10	RJ6	RRJ6GCJ000TE		C21	RCUV1E223MB	0.022 25
R114	RRJ6GCJ472TE	4.7K 1/10	RJ7	RRJ6GCJ000TE		C22	RCUV1H330K	33P 50
R115	RRJ6GCJ100TE	10 1/10	RJ8	RRJ6GCJ000TE		C23	ECEA0GKS470L	47 4
R201	RRJ6GCJ181TE	180 1/10	RJ9	RRJ6GCJ000TE		C24	RCUV1H332MB	0.0033 50
R202	RRJ6GCJ682TE	6.8K 1/10	RJ10	RRJ6GCJ000TE		C26	ECUV1C105ZF	1 16
R203	RRJ6GCJ184TE	180K 1/10	RJ12	RRJ6GCJ000TE		C27	RCUV1H332MB	0.0033 50
R204	RRJ6GCJ222TE	2.2K 1/10	RJ21	RRD18XJ000TE		C28	ECUV1C474ZF	0.47 16
R205	RRJ6GCJ392	3.9K 1/10	RJ23	RRD18XJ000TE		C29	ECUV1H102KC	0.001 50
R207	RRJ6GCJ333	33K 1/10	RJ24	RRD18XJ000TE		C30	RCUV1E223MB	0.022 25
R207	RRJ6GCJ333	33K 1/10	RJ25	RRD18XJ000TE		C31	ECUV1C474ZF	0.47 16
R208	RRJ6GCJ101TE	100 1/10	RJ26	RRD18XJ000TE		C32	ECUV1C224KR	0.22 16
R209	RRJ6GCJ133TE	13K 1/10	CAPACITORS(VALUE, VOLTAGE)			C33	ECUV1E473KB	0.047 25
R210	RRJ6GCJ394TE	390K 1/10	C1	RCUV1H101KB	100 50	C34	ECUV1E473KB	0.047 25
R211	RRJ6GCJ471TE	470 1/10	C2	RCUV1H220KC	22P 50	C35	RCUV1H102KB	0.001 50
R214	RRJ6GCJ472TE	4.7K 1/10	C3	RCUV1H150KC	15P 50	C101	ECEA0DKD470L	47 2
						C102	RCUV1E103KB	0.01 25